Breast Cancer Screening: Should I or Shouldn’t I?

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Research Grants Program Office
Office of Research & Graduate Studies
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Creation of California Breast Cancer Research Program

- Passage of The Breast Cancer Act of 1993
- 45% of funding from a 2 cent per pack cigarette surtax, which generates approximately $24 million per year.
- 4th largest funder of breast cancer in the world.

Individual donations
Stewardship of CBCRP

The Legislature hereby requests the University of California to establish and administer the Breast Cancer Research Program, which is created by this act, as a comprehensive grant and contract program to support research efforts into the cause, cure, treatment, earlier detection, and prevention of breast cancer.

- Housed in Office of Health Affairs, Special Research Programs from 1994-2008
- Now in Research Grants Program Office, Office of Research & Graduate Studies
Since 1993, the CBCRP has funded:

- 894 grants
- totaling > $213 million
- to 101 institutions across the state
When will those scientists make up their minds?
"A mammogram saved my life."
"Get a mammogram for life-saving screening."
"With mammography, radiologists can find a cancer the size of a head of a pin."
"You may have missed seeing the small dot in this ad, which could be the first sign of breast cancer, but your mammogram will find it."
"Mammograms can detect a tumor as little as a grain of rice, while physical exam will not find a cancer until it is 1-2 cm."
"One out of every eight American women will develop breast cancer at some point in her lifetime...A mammogram can detect 90% of cancers."
Common Myths about Mammography

- Mammograms prevent breast cancer
- A cancer found by mammography is by definition “early” and therefore can be “cured”
- All breast cancers can be found early and cured
- There is no risk to mammography
- There is no risk to follow-up of abnormal mammograms
“Early detection saves lives”

- Women whose cancers are detected at a lower stage do better than women whose cancers are detected at a higher stage.
- Women whose cancers are detected at an early stage do better than women whose cancers are detected at a later stage.
- A woman who is diagnosed at a later stage could have been diagnosed at an earlier stage if she had been screened.

Makes sense, right?
Conventional View of Breast Cancer

Life History of a Breast Tumor

- HELU
- ADH
- DCIS
- IBC
- IBC
- DX

5-10 year period

Benign Breast Disease in Women
Richard J. Santen MD, Professor of Medicine, University of Virginia Health System, Charlottesville, Virginia 22908
February 27, 2010
Two Experiences in Screening

Cervical
Incidence rates have decreased as Pap screening increased; prevention and early detection are credited with lowering death rates

Breast (female)
Earlier detection, improved treatment lowered death rates; declines in incidence linked to reduced use of hormone replacement therapy

Source: National Cancer Institute; American Cancer Society
Graphic: Chicago Tribune
In the Old Days, there were 2 groups of Women

- Women who do not have breast cancer
- Women found to have breast cancer (local, regional or distant)
Then we started screening, and there became 3 groups of Women

- Women who do not have cancer
- Women with early breast cancer
- Women with late breast cancer
And as we screened, these groups changed

There became fewer women who do not have cancer

There became more women with early breast cancer

And there are the same number of women with late breast cancer
Trends in Stage at Diagnosis

Early & Late May Have More to do With the Cancer Than the Woman

Rethinking Screening for Breast Cancer and Prostate Cancer
Laura Esserman; Yiwey Shieh; Ian Thompson
Not All Breast Cancers Are Alike

Outcomes of a Mammogram

- No cancer
- Abnormal, requiring additional tests
  - No Cancer
- Cancer that is only treatable when detected preclinically
  - Life saved!
- Cancer that would not have resulted in death
- Cancer that could have been treated later
- Cancer that results in death despite treatment
  - Cancer, but no change in outcome with early detection and treatment
Harms Suffered by Women Who Undergo Screening

- Radiation
- More radiation
- Anxiety
- Biopsy
- Benefit outweighs risk

- Radiation
- Anxiety
- Biopsy
- Rad. Therapy
- Chemotherapy
- Surgery
- Benefit outweighs risk
- False hope

Screening for Breast Cancer: An Update for the U.S. Preventive Services Task Force
HD Nelson; K Tyne; A Naik; C Bougatsos; B K Chan; and L Humphrey
Annals of Internal Medicine November 17, 2009 vol. 151 no. 10 727-737
Outcomes for 2500 Women Aged 50-69 Who Have a Mammogram

1500
No cancer

1000
Abnormal, requiring additional tests
No Cancer

1
Cancer that is only treatable when detected preclinically. Life saved!

5-15
Cancer that would not have resulted in death.

Cancer, but no change in outcome with early detection and treatment

Cancer that could have been treated later.

Cancer that results in death despite treatment
What We Know Today

• The decision about whether to undergo screening mammography is, in fact, a close call.
• Many argue that because it is a delicate decision — involving trade-offs among noncomparable outcomes — it must be left to informed individuals to decide.
• Others will argue that physicians should continue to persuade women to undergo screening and that the modest benefit is worth the associated harms.
So, Should I Screen or Not?

- Think carefully about screening and discuss it with your healthcare provider.
- If you engage in screening, understand the risks as well as the benefits.
- Whether or not you engage in screening, if you feel a lump or other changes in your breast, get it checked out.
- If you get diagnosed with breast cancer and have not been screened, remember that screening would probably not have made a difference.
More Information on Breast Cancer Research

www.cabreastcancer.org
Figure 1.2 Age standardised (World) incidence and mortality rates,